



สมาร์ทโฟน : อุปกรณ์อิเล็กทรอนิกส์เพื่อส่งเสริมการเรียนภาษาอังกฤษ
ของนักศึกษาไทย

**Smartphones: Noteworthy Tools for Enhancing EFL Students'
English Language Learning**

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บทคัดย่อ

ในยุคแห่งสังคมที่หลากหลายด้วยภาษาและข้อมูลข่าวสารที่ทันสมัย ภาษาอังกฤษมีบทบาทสำคัญที่ใช้เป็นภาษาสากลเพื่อใช้ติดต่อสื่อสารกับผู้อื่น ในแวดวงการศึกษา ภาษาอังกฤษใช้สอนในชั้นเรียนในฐานะภาษาต่างประเทศ ด้วยความมุ่งหมายที่จะส่งเสริมให้นักศึกษาประสบความสำเร็จในด้านการศึกษา นอกจากนี้ยังใช้เพื่อประกอบอาชีพอีกด้วย อีกทั้งด้วยความจริงก้าวหน้าอย่างรวดเร็วของเทคโนโลยีและการใช้อุปกรณ์สื่อสารต่าง ๆ ที่เปลี่ยนแปลงอย่างรวดเร็ว ทำให้สมาร์ทโฟนกลายเป็นอุปกรณ์ส่งเสริมการศึกษาที่เหมาะสมและทันสมัยที่สุด และยังส่งเสริมให้นักศึกษาพัฒนาการเรียนภาษาอังกฤษได้ดีอีกด้วย นอกจากนี้จะเห็นได้ว่า สมาร์ทโฟนได้ถูกนำมาใช้กันอย่างแพร่หลายในการจัดการเรียนการสอน ดังนั้น จึงส่งผลให้สมาร์ทโฟนกลายเป็นอุปกรณ์สำคัญสำหรับชีวิตประจำวันของนักศึกษา และด้วยประสิทธิภาพอีกทั้งตักษณ์พิเศษของสมาร์ทโฟน ทำให้นักศึกษารู้สึกว่า สมาร์ทโฟนเพื่อส่งเสริมการเรียนรู้ทางภาษาอังกฤษโดยใช้สมาร์ทโฟนเป็นเครื่องมือ ด้วยสาเหตุว่า สมาร์ทโฟนจะตอบสนองความจริงก้าวหน้าทางด้านการศึกษาและการพัฒนาการจัดการเรียนการสอนในศตวรรษที่ 21 นอกจากนี้ยังส่งเสริมให้นักศึกษาเกิดการเรียนรู้ด้วยตนเอง ด้วยความสามารถในการจัดการเรียนรู้ตลอดชีวิต และเพิ่มคุณค่าของการจัดการเรียนการสอนแบบเชิงลึก จุดมุ่งหมายของการศึกษาครั้งนี้เพื่อสำรวจความคิดเห็นของนักศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศต่อการใช้สมาร์ทโฟนเพื่อส่งเสริมการเรียนรู้ภาษาอังกฤษ เครื่องมือที่ใช้ในการศึกษาครั้งนี้ประกอบด้วยแบบสอบถาม ผลการศึกษาพบว่า นักศึกษาใช้สมาร์ทโฟนในการเรียนรู้ภาษาอังกฤษ เพื่อสืบค้นข้อมูลและทำความหมายของคำศัพท์ภาษาอังกฤษในระดับสูงมาก นอกจากนี้ นักศึกษายังใช้สมาร์ทโฟนเพื่อพัฒนาทักษะทางภาษาทั้ง 4 ทักษะ ได้แก่ ทักษะการฟัง การอ่าน การพูดและ การเขียน ตามลำดับ

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Abstract

In the world of multilingual societies and digital age of information, English plays the most important role to be used as an international language to communicate with one another. In the educational setting, English is used as a foreign language taught in the classroom. This is with the purpose of respond to the students' academic and professional success. Apart from that, by the reason of the prompt growth of technology, and progresses together with popularities in electronic learning technologies, smartphones become one of fantastic learning tools for the students to choose for enhancing English language learning. With the wide use of these devices, mobile learning began to act as a prominent power toward the students' lives. With the potentials and special features of the devices, the students use them to help supporting their English language learning. During the past few years, there were several studies which support the students' English language learning using smartphones. This is with the reason that it will respond to the rapid advancement of education and development of teaching and learning methodologies in the 21st century learning and support the students' autonomous learning and lifelong learning including add value of face-to-face classroom teaching. The purpose of this study was to explore EFL students' attitudes toward using smartphones for enhancing English language learning. The instrument used was consisted of the questionnaire. The results showed that the students used smartphones to learn English language skill. They revealed to use smartphones to search the information as well as to find English vocabulary meaning. Moreover, they used smartphones to enhance their four English language skills: listening, reading, speaking, and writing respectively.

Keywords: Smartphones, EFL Students, English Language Learning

Introduction

In the present world of globalization, there is no doubt that English is one of the most widely used languages not only for a native language, or a second language, but also a foreign language. This is because it is the common means of communication between the people of different nations (Verghese, 2007: 1). Apart from that, it is prominently used as an instrument to retrieve information and communicate each other from various areas: business, industry, tourism, agriculture, or even education.

In Thailand, English becomes significant and vigorous for Thai education. This is not because it is regarded as the most vital foreign language, but also to know other languages than mother language would be useful for the students who study. Furthermore, the ability of using

English is to assist strengthening the individual learning endlessly and give opportunities for improving the students' life by acquiring more knowledge from various forms of media in the form of textbooks, journals, and internet searching in order to achieve personal, occupational, and professional goals. Subsequently, English is commonly taught in Thai schools from kindergarten to university level. This is with the reason that it will support Thai education as an international standard and provide the students' opportunities to use English worldwide in order to share their thoughts, needs, and feelings to others.

During the past ten years, there have been numbers of challenges to support the students' language learning achievement as well as to facilitate conventional courses using communication media. This is because various educators, researchers, and experts recognize that teaching and learning only in the classroom is not enough. Moreover, the genuine success in English language teaching and learning is when the students can actually communicate in English inside and outside the classroom (Davies and Pearse, 2000: 15). In addition, the world has changed speedily and continuously to the evolution of the technologies. Therefore, smartphones are used as one of the hi-tech instrument to deliver instruction.

With this in mind, mobile-technologies are the first priority for many educators to create a new innovative approach in teaching and learning English language in higher education nowadays. Moreover, they are becoming increasingly popular and useful as educational tools across a wide range of disciplines as a means to engage and retain students (Wankel and Blessinger, 2013: 3). Besides, it is considered to be an alternative for better language learning and may be a solution to motivate the students to learn English language effectively because it has potential to enhance the students' achievement and assist them in meeting learning objectives (Shelly, et al., 2004: 18).

It is obviously seen that not only for the educators, but also the technology itself are to support the students' English language learning. With the rapid advancement of technology and new paradigm shift of education in the 21st century learning, technology, especially smartphones, plays the most important instrument not only for students but also teachers to support their teaching and learning. Nowadays, smartphones are mushroomed prominently. Meanwhile applications are designed in order to response to the users' needs for entertainment, searching, or even education. It is to say that mobile learning is a kind of anytime, anywhere learning environment which has the potential to foster a greater sense of immediacy, interactivity, and authenticity due to their built-in flexibility, and learner self-efficacy and learning autonomy (Kukulska-Hulme, Sharples, Milrad, Arnedillo-Sanchez, and Vavoula, 2011; Sharples, 2000; Traxler, 2009; Winters, 2007, as cited in (Wankel and Blessinger, 2013: 6).

In addition, Shelly, et al. (2004: 6.08) revealed that they provide unique, effective, and powerful opportunities for many different types of teaching and learning. Apart from that, they are also supported students' motivation and attention.

Mobile Learning: A New Paradigm for English Language Learning

In the present world of digital education, mobile devices in learning are emerged and continuously used not only to support the students' language learning but also act as a facilitator for the students both inside and outside the classroom. What makes mobile learning or m-learning popular and universal is that it is as 'anywhere, anytime' learning that is not fixed by time (by schedule) or space (by location) and that is supported by digital technologies (Poore, 2013: 144). Apart from that, with the reasons that there are various applications in all smartphones and the students can access all applications anytime anywhere, mobile-learning is effective to English language learning. Fernanda (2014: 2-3) supplemented that they can respond to every learning style which can suit different language learning skill requirements: grammar, vocabulary, reading, listening, writing or speaking. A combination of apps that cover the different skills will help language learning engage, any time, any place and at any pace with a variety of teaching styles, from the repetitive grammar drills to the gamified all-in-one solutions.

This is similar to Hwang and Tsai (2011: E. 65) that mobile learning is using mobile technologies to facilitate learning. Consequently, this makes mobile learning popular and universal. Or to say in other words, mobile learning is to offer not only new and improved ways of interacting for community building and networking, but also for knowledge creation and transfer in collaborative endeavors (Hanewald and Ng, 2011: 2).

According to Hanewald and Ng (2011: 3), mobile devices are able to access the web and are an integral part of the digital revolution. They are regarded as a number of portable, small sized tools that usually have a digital screen with a miniature keyboard or touch input. Furthermore, Kukulska-Hulme and Traxler (2005: 67) supplemented that there are special features that leads mobile learning easy to access. They are: 1) anywhere, anytime access to learning material and general information; 2) the integration of portable communication tools to create a mobile collaborative learning environment anywhere; and 3) anytime access to learning scaffolds and support tools.

Not only all as mentioned above, Ferreira, Klein, Freitas, and Schlemmer (2013: 48) supported that because mobile connectedness continues to sweep across the landscape, the

possibilities of using mobile devices for learning are endless. The value of deploying mobile technologies in the service of learning and teaching seems to be both self-evident and unavoidable. The use of portable technologies makes it easier for learners to study whenever and wherever they want. It also facilitates 'just-in-time' learning, where learners can often take advantage of unexpected free time, since they frequently have their devices with them. Learners can create, share, and adapt their own content and evaluate these in social media networks of peers, colleagues or others.

With the development of mobile technologies and wide use of smart phones, it can be seen as a viable solution to blend a learners' learning environment into their everyday life. Mobile phones with Internet provide a unique opportunity to learn outside of the classroom, making learning available anytime and anywhere (Curriculum Design and Classroom Management, 2015: 435).

Smartphones: Effective Learning Tools for Enhancing English Language Learning

Within the digital information consumption around the world, smartphones are emerged and become not only popular but also universal in several areas, especially in the educational setting in the 21st century. What make smartphones increasing their popularity and usability are: affinity, portability, accessibility, and availability for low cost applications with various functions which have transformed these devices into a realistic means of learning (Ota, 2010: 1). Precisely, smartphones have many special features which support the students to learn English language learning. Prevalently, students use smartphones for language learning with applications for dictionary (45.2 percent), and translation (32.9 percent). Interestingly, only 5.5 percent of the students reported using their smartphones to access authentic resources, such as radio programs or newspapers, in the target language (Edwige and Courtney, 2012: unpage). Furthermore, smartphones are excellent personal portable devices for allowing language learners to complete homework assignments at any time and at any place. They are suitable for short assignments or for activities which do not require extensive composition or labor-intensive typing/input (Facer and Abdous, 2011: 75). This is also supported by Fernando (2010, unpage) that with responsive touch screens, enhanced text entry, high-quality image, audio and video recording, editing, and sharing, voice recognition, storage, connectivity, and GPS all bring together the multi-sensory experience that makes for effective language acquisition.

Capabilities of Smartphones toward EFL Learning

With several successful studies, there are various researchers who have identified the potentials of smartphones applications for EFL learning from secondary to tertiary educational levels both in Thailand and other countries.

Firstly, Kurtz (2012) studied language learners' daily use of smartphones to supplement their language learning. Three non-native speakers of English completed smartphone use logs and were interviewed over a six-week period in order to understand their attitudes and habits regarding their smartphone use. The purpose of this study was to give voice to contemporary language learners about their use of this technology so that their regular use of it may be understood. The study also reported that these learners made regular use of the smartphone as a dictionary, as a study tool for standardized tests and for communication purposes across various times and locations.

In 2013, Hong, Hwang, Tai, & Chen conducted EVL@S (an App for the iPhone 4) to improve English vocabulary learning for learners to reduce the number of repetitions and to improve vocabulary memorization. There were 107 participants who were collected to confirm factor analysis to verify the reliability and validity of the research instrument, and structure equation modelling was applied to better understanding the correlates of users' learning confidence. The results revealed that smartphone self-efficacy could serve as a predictor for English learning anxiety and a judgment of over-confidence.

Moreover, Sandberg, Maris, and Geus made a study of mobile technology for learning English as a second language for primary school students in 2014. There are three groups of students to be treated. The first group had classroom lessons in English about zoo animals and their characteristics. The second group took classroom lessons and worked with a mobile application on location in a public zoo. And the third group received the same treatment as the second but, as an extension, was allowed to take the mobile application home for a fortnight. The results showed that the group which took the mobile phone home improved the most. However, when the additional learning time, spent apart from school, of this third group was controlled for, the superior performance of the group disappeared. The results indicate that students are motivated to use the application in their spare time and that this benefits their learning.

In the same year, there is one more interesting study of Seo&Choi who investigated the effect of using a smart-phone speaking application on Korean middle school students' English expression learning and satisfaction. There were two groups participated in this study: the experimental group who worked with the application and the control group who was provided

with handouts. Each group was divided into two subgroups based on the subjects' score of a standardized listening test. Participants took a pretest at the beginning of the study and completed the posttest and survey after six weeks. Independent t-tests were used to analyze differences in experimental and control groups for both elementary and advanced level learners. Results revealed a significant difference between pre and post scores for elementary level learners. The results indicated that use of mobile application was more effective for the elementary level of learners than advanced learners. The participants also responded positively in terms of functionality, ease of use and portability.

In 2015, Wu designed a smartphone app called Basic4Android to teach English (L2) vocabulary. The objectives of this study were to develop a Basic4Android smartphone app and investigated its effectiveness as a tool in helping English as a Foreign Language college students learn English vocabulary. The study showed that the students using the program significantly outperformed those in the control group in acquiring new vocabulary.

How EFL Students Are Learnt Language

With the reason that first, second, or even foreign language learners learn in different ways, it is essential for teachers and researchers to understand the nature of their learning. Krashen (1981: 1) explained language acquisition that it is very similar to the process the students use in acquiring first and second languages. It requires meaningful interaction in the target language--natural communication--in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding. In Thai situation, the students learn English as a foreign language in order to respond to the educational function and occupational purposes (Broughton, et al., 198: 7). Under this circumstances, Lightbown and Spada (2001: 32) supported that behaviourism and innatism can help the students learn language successfully. Behaviourism is emphasized on imitation, practice, reinforcement (feedback on success), and habit formation. Whilst, innatism in the perspective of Chomsky's theory is based on the hypothesis that innate knowledge of the principles of Universal Grammar permits the students to acquire the language of their environment (Lightbown and Spada (2001: 36). Moreover, Krashen (2009: 1) believed that there are two main factors to develop the students' language ability: acquisition and learning. Acquisition is a subconscious process which learns by own language or pick up simply by living and working in a foreign country. Learning is the conscious process of developing a foreign language through language lessons and a focus on the grammatical features of that language. With this in mind, it

is important to concentrate on factors affecting to second language learning: motivation and attitude and learner preferences in order to support their ultimate goal of learning. Motivation becomes one of the key factors that influence the rate and success of second/foreign language learning. It provides the primary impetus to initiate learning the L2 and later the driving force to sustain the long and often tedious learning process (Dornyei, 1998: 117).

Significance of the Study

With the ultimate goal to support the students' English language learning, it is prominent for the teachers to discover an innovative instructional approach in order to help students improve their language learning achievement.

Furthermore, this perspective will lead to a better understanding of the English language learning environment which is emerged not only in the classroom, but outside the classroom. Plus, it can respond to the rapid advancement of education and development of teaching and learning methodologies in the 21st century learning which is emphasized on information, media and technology skills (Partnership for 21st Century Learning, 2015: 1-2). And it will also support the students' autonomous learning and lifelong learning including add value of face-to-face classroom teaching. Last, but not least, this study will be useful for people who get involved with education such as administrators, coordinators, and teachers who help enriching the present educational system.

Purposes of the Study

The purpose of the study aims to explore EFL students' attitudes toward using smartphones for enhancing English language learning.

Research Methodology

Participants

The population of this study is 11,101 undergraduate students who enroll at Mae Fah Luang University as revealed by the Registrar's Office. The samples were 384 first year students who studied Intensive English course at Mae Fah Luang University in the first semester, academic year 2015. The sample size which was consisted of 384 first year students is according to Krejcie&Morgan (1970). All of them were non-English major students and they were selected by purposive sampling based on the classes assigned for the researcher by the University Registrar's Office.

Research Instruments

For this study, the questionnaire in the format of five-point Likert scale was designed in order to explore EFL students' attitudes toward using smartphones for enhancing English language learning. The questionnaire was consisted of two parts. The first part was consisted of 13 statements which were in the areas of their attitudes toward using smartphones to enhance the students' English language learning. The second part was opened-questions to let the students express their attitudes about the use of smartphones for their language learning. The questionnaire was evaluated by the experts and revised before collecting the data.

Validity and Reliability of the Instruments

Before collecting the data, the questionnaire was evaluated by five experts specializing in the field of English language, educational technology, and computer technology. They were requested to evaluate the content validity and the appropriateness and completeness of the factors used in the questionnaire. The experts were requested to evaluate the questionnaires for two times. For the first time, the questionnaire was formed as in the open-ended format to give comments and suggestions. The second time was in the format of 3 rating scale.

Research Procedures

After the researcher studied a background information and a study of related theories, the questionnaire was designed as a rating scale to evaluate the students' attitudes toward using smartphones to enhance English language learning. The first draft of the questionnaire was proposed to five experts for the consideration of the completeness of factors used for the questionnaire and the appropriateness of language used in the questionnaire. After that, revision was required according to experts' comments and suggestions. Then the final draft of the questionnaire was conducted in the complete format.

Findings

In order to explore EFL students' attitudes toward using smartphones for enhancing English language learning, the questionnaires were administered to 384 first year students who studies Intensive English course at Mae Fah Luang University in the first semester, academic year 2015. The results of the findings were presented in the followings:

Table 1: The Mean Rating for the Students' Attitudes toward Using Smartphones for Enhancing English Language Learning

No	Items	\bar{x}	S.D.	Meaning
1	Smartphones help the students to learn English language.	4.55	.628	highest
2	Smartphones help the students search the information quickly.	4.64	.580	highest
3	Smartphones help the students to save the time for studying.	4.06	.886	high
4	Smartphones are beneficial for studying English language.	4.39	.677	high
5	Smartphones are easy and comfortable to use.	4.50	.646	highest
6	The students can use smartphones to find English vocabulary meaning.	4.56	.584	highest
7	The students use smartphones during the classroom.	4.02	.859	high
8	The students use smartphones to search the information for studying English language.	4.16	.878	high
9	The students use smartphones to search the grammatical lessons.	3.40	.959	average
10	The students use smartphones to develop their English language listening.	4.28	.849	high
11	The students use smartphones to develop their English language speaking.	4.25	.914	high
12	The students use smartphones to develop their English language reading.	4.27	.862	high
13	The students use smartphones to develop their English language writing.	4.22	.889	high

n = 384

According to the table above, it could be seen that four out of thirteen items were at the highest level. They were the items 'Smartphones help the students search the information quickly.' (mean = 4.64), 'The students can use smartphones to find English vocabulary meaning.' (mean = 4.56), 'Smartphones help the students to learn English language.' (mean = 4.55), and 'Smartphones are easy and comfortable to use.' (mean = 4.50). This meant the students were highly satisfied with the use of smartphones to enhance their English language learning. Apart from that, there were seven items which were at the high level. They were the items: 'Smartphones are beneficial for studying English language.' (mean = 4.39), 'The students use smartphones to develop their English language listening.' (mean = 4.28), 'The students use smartphones to develop their English language reading.' (mean = 4.27), 'The students use smartphones to develop their English language speaking.' (mean = 4.25), 'The students use smartphones to develop their English language writing.' (mean = 4.22), 'The students use smartphones to search the information for studying English language.' (mean = 4.16), 'Smartphones help the students to save the time for studying.' (mean = 4.06), and 'The students use smartphones during the classroom.' (mean = 4.02) respectively. There was only one item which was 'The students use smartphones to search the grammatical lessons.' (mean = 3.40).

Discussion and Conclusions

Regarding to the present study which was attempted to explore EFL students' attitudes toward using smartphones for enhancing English language learning, it was discussed that smartphones are user friendly to the students. They use smartphones to facilitate their English language learning not only some dynamic English language skills like listening and speaking, but also literal skills like reading and writing. This is to say, smartphones which were easy and comfortable were prominently used in order to search the information quickly and find English vocabulary meaning. Apart from that, the students were able to practice their English language skills as well. This is similar to the findings of Kurtz (2012) that the students made regular use of the smartphones as a dictionary, as a study tool for standardized tests and for communication purposes across various times and locations. Evidently, smartphones are one of the effective instruments to use in order to enhance the students' English language learning and it will lead to respond to the ultimate goal of education which start the students down the path of becoming self-regulated and lifelong learners and to make learning a natural part of their life-worlds (Wankel and Blessinger, 2013: 16).

References

- Broughton G., et al. (1985). **Teaching English as a Foreign Language.** New York: Routledge.
- _____. (2015). **Curriculum Design and Classroom Management: Concepts, Methodologies, Tools, and Applications.** New York: IGI Global.
- Davies P., and Pearse E. (2000). **Success in English Teaching.** New York: Oxford University Press.
- Dornyei Z. (1998). “Motivation in Second and Foreign Language Learning.” Retrieved August 22, 2015, from <http://www.zoltandornyei.co.uk/uploads/1998-dornyei-lt.pdf>
- Edwige S., and Courtney F. (2012). “Using Mobile Learning Resources in Foreign Language Instruction.” Retrieved August 22, 2015, from <http://er.educause.edu/articles/2012/6/using-mobile-learning-resources-in-foreign-language-instruction>
- Facer R., and Abdous M. (2011). **Academic Podcasting and Mobile Assisted Language Learning: Applications and Outcomes.** New York: Information Science Reference.
- Fernanda R. (2015). “How Smartphone Apps Are Revolutionizing Language Learning.” Retrieved May 21, 2015, from <http://phys.org/news/2014-04-smartphone-apps-revolutionizing-language.html>
- Ferreira J., et al. (2013). “Mobile Learning: Definition, Uses and Challenges.” In Wankel L., and Blessinger P. 2013. **Increasing Student Engagement and Retention Using Mobile Applications: Smartphones, Skype and Texting Technologies.** London: Emerald.
- Fernando R. (2010). “How Smartphone Apps are Revolutionising Language Learning.” Retrieved August 24, 2015, from <http://theconversation.com/how-smartphone-apps-are-revolutionising-language-learning-25165>
- Hanewald R., Ng W. (2011). “The Digital Revolution in Education: Digital Citizenship and Multi-Literacy of Mobile Technology.” In Ng W. 2011. **Mobile Technologies and Handheld Devices for Ubiquitous Learning: Research and Pedagogy.** New York: IGI Global.
- Hong, Jon-Chao, et al. (2013). “Using Calibration to Enhance Students’ self-confidence in English Vocabulary Learning Relevant to their Judgment of Over-confidence and Predicted by Smartphone Self-efficacy and English Learning Anxiety.” **Computers & Education** 72, 313-322.
- Hwang G. and Tsai C. (2011). “Research Trends in Mobile and Ubiquitous Learning: a Review of Publications in Selected Journals from 2001 to 2010.” **British Journal of Educational Technology** 42,4, E65-E70.

- Krashen D. (1981). "Second Language Acquisition and Second Language Learning." Retrieved August 21, 2015, from http://sdkrashen.com/content/books/sl_acquisition_and_learning.pdf
- Krashen D. (2009). "An Introduction to the Work of Stephen Krashen." Retrieved August 21, 2015, from <http://esl.fis.edu/teachers/support/krashen.htm>
- Kurtz, L. 2012. "Learning from Twenty-First Century Second Language Learners: A Case Study in Smartphone Use of Language Learners." Master's Thesis, Faculty of Education, Iowa State University.
- Kukulska-Hulme A. and Traxler J. (2005). **Mobile Learning: a Handbook for Educators and Trainers.** New York: Routledge.
- Lightbown M., and Spada N. (2001). **How Languages are Learned.** Oxford: Oxford University Press.
- Ota F. (2010). "The Effectiveness of Smartphone and Tablet PC Apps for Japanese Language Learning." Retrieved August 22, 2015, from http://www.iallt.org/iallt_journal/the_effectiveness_of_smartphone_and_tablet_pc_apps_for_japanese_language_learning
- Partnership for 21st Century Learning. (2015). "Framework for 21st Century Learning." Retrieved August 18, 2015, from http://www.p21.org/storage/documents/P21_framework_0515.pdf
- Poore M. (2013). **Using Social Media in the Classroom.** California: SAGE.
- Sandberg J., Maris M., and Geus K. (2014). "Mobile English Learning: an Evidence-based Study with Fifth Graders." **Computers&Education** 57, 1334-1347.
- Seo W. and Choi Inn-Chull. (2014). "The Effect of Using a Smart-phone Speaking Application on Korean Middle School Students' English Expression Learning and Satisfaction." **Multimedia-Assisted Language Learning** 17, 1, 34-57.
- Shelly B., Cashman J., Gunter E. and Gunter A. 2004. **Teachers Discovering Computers: Integrating Technology in the Classroom.** Cambridge: Cambridge Press.
- Vergheze C. (2007). **Teaching English as a Second Language.** New Delhi: Sterling.
- Wankel A. and Blessinger P. (2013). "New Pathways in Higher Education: an Introduction to Using Mobile Technologies." In **Increasing Student Engagement and Retention using Mobile Applications: Smartphones, Skype and Texting Technologies.** New York: Emerald.
- Wu Q. (2015). "Designing a Smartphone App to Teach English (L2) Vocabulary." **Computer& Education** 85, 170-179.